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ABSTRACT

A 5-week pre-college orientation program for new freshman American Indian students was conducted in the summer of 1970 by Brigham Young University. The program included weekly field trips to industries in the area, help with study skills, problem solving, choosing a college major, positive thinking, and experience with college English and math. Three groups (the Indian orientation students, and control groups of Indian and Caucasian students) were compared on 3 instruments to determine if the orientation program aided Indian students in their college major choice, in development of mature vocational attitudes, and in development of improved self concept. It was found that the orientation program did aid Indian students significantly. A one-year follow-up of college grades showed that the Indian orientation students made significantly greater grade gains over that which was expected than did the Indian students not taking orientation, with the female orientation students making the greater gain. (Author/PS)

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# THE EFFECT OF A FIVE WEEK PRE COLLEGE ORIENTATION PROGRAM FOR INDIAN STUDENTS

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ABSTRACT

American Indian college students have had a very difficult time in their academic attempts in American colleges, with a great majority of these students not succeeding. The Brigham Young University with the aid of the Donner Foundation conducted a five week pre college Orientation Program in the summer of 1970 for new freshman Indian students to help prepare them for their forthcoming college experience. Some of the experiences included in the program were weekly field trips to many industries in the area, help with study skills, problem solving, choosing a college major, positive thinking, and also experiences with college English and math. This study was an attempt to evaluate this five week program by comparing three groups--the Indian Orientation students, a control group of Indian students who did not take the Orientation, and a control group of Caucasian students in the General College who did not take the Orientation Program. These groups were compared on three instruments to help determine if the Orientation Program aided Indian students in their movement toward a college major choice, development of mature vocational attitudes, and development of improved self concept. It was found that the Orientation Program, as presented and conducted, did aid Indian students significantly in their progress toward a college major choice, in their development of more mature vocational attitudes, and in changing their self concept so they will be better prepared for the realities of their forthcoming college experience. A one-year follow up of college grades revealed that the Indian Orientation students made significantly greater grade gains over that which was expected than the Indian students not taking Orientation, with the Orientation female students making the greater gain.

# The Effect of a Five Week Pre College Orientation Program for Indian Students

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One of the big challenges facing America today is to educationally lift the minority groups so they will be able to enjoy the full advantage of our free society as others have had the chance to do. However, along with enjoying the advantages of our society, it is also hoped that these minorities will be able to make their full contribution and accept their share of the responsibility for the improvement and success of our society.

This study focuses on the American Indian college student minority who is attempting to succeed in an academic college atmosphere. Some recent studies have revealed that Indian students are not lacking in intelligence (Havighurst, 1970) but that their low achievement is due to some combination of their experience in their homes and in their schools. In a very comprehensive achievement test study done by Coombs, Kron, Collister, and Anderson (1958) it was revealed that Indian children tend to do very poorly on standardized tests when compared with state and national scores compiled by the rest of the relevant stratum of the school population. This research, seemed to indicate also that the gap between the levels of achievement of the white and Indian students widens as they progress through school. Smith (1968) reports that the low level of achievement of Indian students persists from the first grade through college.

Coombs (1958), Townsend (1963), and Silvanoli (1968) each have found from their separate studies that by the time Indian students reach high school they are nearly five years behind the white students in reading scores. This undoubtedly would help to account for the fact as Selinger (1968) found that

there is an extremely high dropout rate of Indian students who attempt academic college programs as compared to those who attempt technical-vocational programs. And yet there is a great need for Indians trained in the professions which require an academic college training.

The General College of the Brigham Young University financed by a grant from the Donner Foundation in the Summer of 1970 sponsored a Five Week Pre college Orientation Program for Indian students who were entering college as freshmen in the Fall. The reason for this orientation program was to help prepare the Indian students for their forthcoming college experience so they could succeed by attempting to compensate for some of the low academic achievement they had accumulated over the years.

The Five Week Pre College Orientation Program gave the new freshman Indian students experience in study skills; mathematics; English; orientation toward a college major; self concept improvement; physical education; and weekly field trips to businesses, industry, and cultural opportunities in the surrounding area. The students had the chance to develop leadership through the many student sponsored activities planned and carried out during the orientation period.

## Research Design

Three groups were involved in the study--91 freshman Indian students who took the five week pre college orientation program from August 9, 1970 to September 12, 1970; 110 freshman Indian students who did not have the program; and 93 white students who were taking General College classes who did not have the program. Half of the orientation students experienced a self concept improvement program called Zoom and half did not.

During the week of September 30, the first week of the fall semester

classes, the three groups were administered and compared on three instruments: a Self Report instrument which measured the students status towards a college major, the Crites' VDI, which measured their vocational maturity attitude and the Tennessee Self Concept Scale which measured several aspects of their self concept. To help determine the academic potential of each group as they began college, the groups were compared by using the ACT Composite score and Brigham Young University Expected G.P.A.

The three groups were followed up during their freshman year and comparisons were made of their fall semester G.P.A. to determine if differences existed in the success of each group in their college academic programs. For the G.P.A. comparisons, the three groups were divided into male and female groups so that sex differences could be observed.

Analysis of variance and t-test comparisons were made on the various variables by using the Brigham Young University 360 Computer.

## Results

On the Self Report instrument as reported in Table 1, the Indian Orientation students were significantly farther advanced toward a college major than the Indian and Caucasian Control Groups. No significant differences existed when comparing the Orientation male and female groups or the Orientation Self Concept improvement Zoom groups.

The Indian Orientation students as revealed in Table 2 had a significantly more mature Vocational attitude on the Crites' Scale than the Indian Control group. However, the Caucasian control group proved to have significantly more mature vocational attitudes than either of the two Indian groups. No differences existed when comparing the male and female or Zoom groups on the same instrument.

In testing the self concept of the groups, no significant self concept differences existed between the experimental or control Indian groups as reported in Table 3. Significant differences did exist, however, on the self criticism scale when the Indian Orientation students who took the positive approach Zoom program and the Orientation students who did not, were compared. The Zoom students seemed to have developed a more normal, healthy openness while the students not having the program remained more defensive. The Caucasian Control group had significantly less conflict in perception than either of the Indian groups on the total conflict score. Both Indian groups, on the total positive score, were significantly more doubtful about their own worth than the Caucasian control group.

Before attempting to compare the academic success of each of the three groups for their first year of college, it was necessary to determine if differences existed between the groups as far as the college potential success was concerned. Tables 4 and 5 compare the groups as far as their Expected College G.P.A. and Composite ACT scores are concerned.

As far as the EGPA comparisons show, the Indian Orientation male had a significantly lower EGPA than the Indian Control male and female groups and the Caucasian male and female groups. The Indian Orientation female group had a significantly lower EGPA than each of the Control Caucasian groups, but no differences existed when a comparison was made with the control Indian groups.

ACT Composite score comparisons reveal that the only difference between the Indian male and female groups was that the Indian Orientation female score was significantly lower than the Indian control male score. The Caucasian male and female composite ACT score was significantly higher than

all Indian groups except that no difference existed between the Indian Control male students and the Caucasian Control female students.

A follow up of grades for the first year in college for the three groups revealed some interesting results. Table 6 shows the Fall G.P.A. Comparisons of the three groups by sex. When the Indian groups were compared, the Indian Orientation female students had a significantly higher Fall G.P.A. than the Indian Orientation male students and the Control Indian male group - no differences were found to exist between the Orientation female group and the Caucasian Control male group - the Caucasian groups had significantly higher Fall G.P.A.'s than all other Indian groups.

The Spring G.P.A. group comparison differences were the same as the Fall except for the fact that the Indian Orientation female group had a significantly higher G.P.A. than the Indian Control female group instead of the Indian Control male group where no difference existed. Table 7 displays these results.

The freshman year composite G.P.A. for each group when compared, revealed the fact that the Indian Orientation female students had significantly higher grades than Orientation male students and the Control Indian female group, although they were not significantly different from the Control Indian male group. The Control Caucasian male and female groups had a significantly higher Composite G.P.A. than each of the Indian groups. These comparisons are given in Table 8.

A very important final comparison made in this study was to see how much each gained grade wise over that which was expected of them in the beginning. Table 9 reveals the fact that the orientation students made a significantly larger grade gain than the Indian students not taking the orientation with the female orientation students making the greater gain.

## Discussion

The main purpose of this study was to find out if Indian students who had a five week pre college orientation program were able to make a better adjustment to their college experience and achieve greater academically, than Indian students not having this experience.

All new freshman Indian students were invited to attend the pre college orientation program; however, it is interesting to note that those who came had less college potential than those who did not come for the orientation experience. This is especially true of the Indian Orientation male students.

Even though the orientation students had less academic potential as measured by the B.Y.U. Expected G.P.A. and ACT scores, they seemed to be more oriented toward a college major and have more mature vocational attitudes than the Indian students who did not have the Orientation.

The Orientation did not seem to change their self concept much except for the fact that the Indian Orientation students who took the positive approach Zoom program seemed to develop a more healthy openness in their relation to others than the Orientation students not experiencing the Zoom program.

It is interesting to note that the Indian female orientation students made significantly higher grades for fall semester and the year's composite than the male orientation students. And, even though the Indian orientation female students had a lower expected G.P.A. than the Indian control female group, they had a significantly higher composite G.P.A. at the end of the freshman year. As expected, the Caucasian male and female groups had significantly higher G.P.A.'s than each of the Indian groups.

When the G.P.A. Gain scores for Indian groups were compared, the Indian

Orientation students made greater gains over that which was expected than the Indian students not having the Orientation experience with the female Orientation students making the greater gain.

From this study it seems reasonable to conclude that the Orientation Program was very worth while for those Indian students having this experience before entering college. The Orientation students seemed better prepared as far as knowing what they wanted to study in college, were more mature in their vocational attitude, and made significantly greater gains academically than those Indian students who did not have the Orientation experience.

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Table 1

Analysis of Variance Mean Comparisons of the

Various Groups on the Self Report

| Groups | Number | Mean | F |
|---|---|---|---|
| Indian Orientation | 76 | 4.210 | 13.875** |
| Control (Indian) | 69 | 3.426 | |
| Indian Orientation | 76 | 4.210 | 4.161* |
| Control (Caucasian) | 100 | 3.836 | |
| Control (Indian) | 69 | 3.426 | 3.597 |
| Control (Caucasian) | 100 | 3.836 | |
| Orientation Female | 54 | 4.296 | 1.137 |
| Orientation Male | 22 | 4.000 | |
| Orientation Zoom | 36 | 4.250 | .141 |
| Orientation No Zoom | 39 | 4.153 | |

*p < .05
**p < .01

Table 2

Analysis of Variance Mean Comparisons of the Various Groups on the Crites' Vocational Development Inventory

| Groups | Number | Mean | F |
|---|---|---|---|
| Indian Orientation | 76 | 34.263 | 5.090* |
| Control (Indian) | 69 | 32.043 | |
| Indian Orientation | 76 | 34.263 | 8.031** |
| Control (Caucasian) | 100 | 36.779 | |
| Control (Indian) | 69 | 32.043 | 20.308** |
| Control (Caucasian) | 100 | 36.779 | |
| Orientation Female | 54 | 34.314 | .016 |
| Orientation Male | 22 | 34.136 | |
| Orientation Zoom | 36 | 34.277 | .009 |
| Orientation No Zoom | 39 | 34.153 | |

*p < .05
**p < .01

Table 3

Tennessee Self Concept Group Mean Analysis of Variance Comparisons

| | Self Criticism | Total Conflict | Total Positive | Total Variability |
|---|---|---|---|---|
| Ind. Orient. | 31.894 | 36.736 | 332.210 | 52.776 |
| Control (Ind.) | 31.405 | 37.507 | 332.086 | 50.014 |
| Ind. Orient. | 31.894 | 36.736 | 332.310 | 52.776 |
| Control (Cau.) | 32.000 | 29.679** | 348.619** | 49.459 |
| Control (Ind.) | 31.405 | 37.507 | 332.086 | 50.014 |
| Control (Cau.) | 32.000 | 29.679** | 348.619** | 49.459 |
| Ind. Orient. Zoom | 33.611 | 36.555 | 325.277 | 55.750 |
| Ind. Orient. No Zoom | 30.349* | 36.893 | 338.449 | 50.099 |

*p < .05
**p < .01

Table 4

Expected College GPA Mean T-Ratio Comparisons

| | Indian Orientation Male | Indian Orientation Female | Control (Indian Male) | Control (Indian Female) | Control (Caucasian Male) |
|---|---|---|---|---|---|
| Indian Orientation Female | 1.519<br>1.626 | | | | |
| Control (Indian Male) | 1.519<br>1.784** | 1.626<br>1.784 | | | |
| Control (Indian Female) | 1.519<br>1.702* | 1.626<br>1.702 | 1.784<br>1.702 | | |
| Control (Caucasian Male) | 1.519<br>1.908** | 1.626<br>1.908** | 1.784<br>1.908 | 1.702<br>1.908* | |
| Control (Caucasian Female) | 1.519<br>1.807** | 1.626<br>1.807* | 1.784<br>1.807 | 1.702<br>1.807 | 1.908<br>1.807 |

*p < .05
**p < .01

Table 5

ACT Composite Mean T-Ratio Comparisons

| | Indian Orientation Male | Indian Orientation Female | Control (Indian Male) | Control (Indian Female) | Control (Caucasian Male) |
|---|---|---|---|---|---|
| Indian Orientation Female | 13.600<br>13.589 | | | | |
| Control (Indian Male) | 13.600<br>15.479 | 13.589<br>15.479* | | | |
| Control (Indian Female) | 13.600<br>14.177 | 13.589<br>14.177 | 15.479<br>14.177 | | |
| Control (Caucasian Male) | 13.600<br>17.453** | 13.589<br>17.453** | 15.479<br>17.453** | 14.177<br>17.453** | |
| Control (Caucasian Female) | 13.600<br>16.423** | 13.589<br>16.423** | 15.479<br>16.423 | 14.177<br>16.423** | 17.453<br>16.423 |

*p < .05
**p < .01

Table 6

Fall GPA Mean T-Ratio Comparisons

| | Indian Orientation Male | Indian Orientation Female | Control (Indian Male) | Control (Indian Female) | Control (Caucasian Male) |
|---|---|---|---|---|---|
| Indian Orientation Female | 1.645<br>2.052* | | | | |
| Control (Indian Male) | 1.645<br>1.662 | 2.052<br>1.662* | | | |
| Control (Indian Female) | 1.645<br>1.868 | 2.052<br>1.868 | 1.662<br>1.868 | | |
| Control (Caucasian Male) | 1.645<br>2.419** | 2.052<br>2.419 | 1.662<br>2.419** | 1.868<br>2.419** | |
| Control (Caucasian Female) | 1.645<br>2.700** | 2.052<br>2.700** | 1.662<br>2.700** | 1.868<br>2.700** | 2.419<br>2.700 |

*p < .05
**p < .01

Table 7

Spring GPA Group Mean T-Ratio Comparisons

| | Indian Orientation Male | Indian Orientation Female | Control (Indian Male) | Control (Indian Female) | Control (Caucasian Male) |
|---|---|---|---|---|---|
| Indian Orientation Female | 1.606<br>2.091* | | | | |
| Control (Indian Male) | 1.606<br>1.918 | 2.091<br>1.918 | | | |
| Control (Indian Female) | 1.606<br>1.773 | 2.091<br>1.773* | 1.918<br>1.773 | | |
| Control (Caucasian Male) | 1.606<br>2.356** | 2.091<br>2.356 | 1.918<br>2.356* | 1.773<br>2.356** | |
| Control (Caucasian Female) | 1.606<br>2.629** | 2.091<br>2.629** | 1.918<br>2.629** | 1.773<br>2.629** | 2.356<br>2.629 |

*p < .05
**p < .01

Table 8

Composite GPA Mean T-Ratio Comparisons

| | Indian Orientation Male | Indian Orientation Female | Control (Indian Male) | Control (Indian Female) | Control (Caucasian Male) |
|---|---|---|---|---|---|
| Indian Orientation Female | 1.757<br>2.207** | | | | |
| Control (Indian Male) | 1.757<br>1.963 | 2.207<br>1.963 | | | |
| Control (Indian Female) | 1.757<br>1.831 | 2.207<br>1.831** | 1.963<br>1.831 | | |
| Control (Caucasian Male) | 1.757<br>2.487** | 2.207<br>2.487* | 1.963<br>2.487** | 1.831<br>2.487** | |
| Control (Caucasian Female) | 1.757<br>2.720** | 2.207<br>2.720** | 1.963<br>2.720** | 1.831<br>2.720** | 2.487<br>2.720 |

*p < .05
**p < .01

Table 9

Freshman Indian Groups Mean G.P.A. Gain Scores
Compared by Analysis of Variance

| | Mean EGPA | Mean Comp. GPA | Mean Gain Score** |
|---|---|---|---|
| Indian Orientation Male | 1.519 | 1.757 | .238 |
| Indian Orientation Female | 1.626 | 2.207 | .581 |
| Control Indian Male | 1.784 | 1.963 | .179 |
| Control Indian Female | 1.702 | 1.831 | .129 |

**p < .01

Note - Mean gain scores were obtained by subtracting the Expected G.P.A. from the Freshman year Composite G.P.A.